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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/576,662

12/22/2006

Michael Beuschel

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EXAMINER

BRAINARD, TIMOTHY A

ART UNIT

PAPER NUMBER

3662

MAIL DATE

DELIVERY MODE

09/22/2008

PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/576,662	Applicant(s) BEUSCHEL ET AL.	
	Examiner TIMOTHY A. BRAINARD	Art Unit 3662	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 22 December 2006.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 12-22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 12, 13 and 16-22 is/are rejected.
- 7) ☒ Claim(s) 14 and 15 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 4/21/2006 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------|-------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Claim Objections

1. Claim 15 is objected to because of the following informalities: claim 15 reads “...(the number of the sensed pulses which belong together) and (the number of quantization levels which are superimposed with the modulation signal) coprimes.” The statement appears to be missing the verb “are” so as to read “(the number of the sensed pulses which belong together) and (the number of quantization levels which are superimposed with the modulation signal) are coprimes.” Appropriate correction is required.

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 12, 16, and 19-22

1. Claims 12, 16, 19-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Wolcott et al (US 3730628)** in view of **Saryo (US 60878980)**. **Wolcott** teaches **(claim 1 and 22)** a method for measuring a distance between a distance sensor and an object (col 3, lines 38-45), the method comprising: emitting electromagnetic impulse signals (col 3, lines 40-42); and receiving signals which are reflected by the object (col 3, lines 38-45), wherein the signal which is reflected by the object comprises a related

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sequence of pulses , each pulse being separated in order to attain a sensed pulse, and the sensed pulses are added together and a modulation signal is superimposed onto the received pulses prior to separation and addition (**col 2, lines 31-57**), (**claim 16**) the modulation signal is an unbiased modulation signal (**col 3, lines 38-45**), (**claim 19**) the received pulses are scaled subject to the modulation signal (**col 2, lines 31-57**), (**claim 20**) the received pulses are displaced subject to the modulation signal (**col 2, lines 31-57**), and (**claim 21**) the time location of the signal propagation time is varied, subject to the modulation signal (**col 2, lines 31-57**).

2. **Wolcott** does not teach the distance sensor being on a vehicle.

2. **Saryo** teaches the distance sensor being on a vehicle. It would have been obvious to modify **Wolcott** to include the distance sensor being on a vehicle because it is one of multiple applications of a distance measuring device with no new or unexpected results.

Claims 13 and 17

3. Claims 13 and 17 are rejected under 35 U.S.C. 103(a) as being unpatentable over **Wolcott** in view of **Saryo** as applied to claim 12 above, and further in view of Canal (US 5349358). **Canal** teaches (**claims 13 and 17**) the modulation signal comprises a specified and, during a related sequence of pulses, constant amplitude distribution and the modulation signal is a sawtooth signal (**abs**). It would have been obvious to modify **Wolcott** in view of **Saryo** to include the modulation signal comprises a specified and, during a related sequence of pulses, constant amplitude distribution

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and the modulation signal is a sawtooth signal because it is one of multiple design choices with no new or unexpected results.

Claims 18

4. Claims 18 is rejected under 35 U.S.C. 103(a) as being unpatentable over **Wolcott** in view of **Saryo** as applied to claim 12 above, and further in view of Adelson (US 5076687). **Adelson** teaches (**claim 18**) the quantization levels being scaled by the modulation signal (**col 9, lines 23-36**). It would have been obvious to modify **Wolcott** in view of **Saryo** to include the quantization levels being scaled by the modulation signal because it is one of multiple design choices with no new or unexpected result.

Allowable Subject Matter

Claims 14 and 15 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TIMOTHY A. BRAINARD whose telephone number is (571) 272-2132. The examiner can normally be reached on Monday - Friday 8:00 - 5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas Tarcza can be reached on (571) 272-6979. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

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Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/T. A. B./
Examiner, Art Unit 3662

/Thomas H. Tarcza/
Supervisory Patent Examiner, Art Unit 3662